Amendment

Application No. 09/668,866 Page 9

MARKED UP COPY OF THE CLAIMS

1. (Amended) [An apparatus for removing semiconductor wafers from within the runner disks in a] A double-sided polishing machine, comprising:

an upper polishing disk, a lower polishing disk, and runner disks on the lower polishing disk having openings for accommodating wafers, the runner disks being moved between the polishing disks upon rotation of the polishing disks for machining both surfaces of the wafers;

control means adapted to stop the movement of the runner disk such that the runner disks attain a precise predetermined position on the lower polishing disk;

an unloader assembly provided adjacent the polishing machine and said unloader assembly having a single arm member supporting a suction head designed to rotate about a first vertical axis, the suction head being provided with a plurality of suction ports for a contemporary engagement of all wafers in a runner disk, the arm member having a vertical axis at a predetermined spacing from the first vertical axis about which the arm member is rotatably supported between a first position wherein the suction head is above a lay-down device and a second position wherein the first vertical axis of a suction head is aligned with the center of one runner disk in the predetermined position, the runner disk further having a mark associated with one opening of the runner disk and the suction head having one sensor for detecting the mark during rotation of the suction head aligned with the runner disk to align the suction ports with the individual wafers in the runner disk.

[a suction head (52) adapted to be connected to a vacuum, which has a plurality of suction ports (60, 61) such that all semiconductor wafers (26) received by a runner disk (24) may be gripped simultaneously;

an arm (50) on which the suction head (52) is rotatably supported about a vertical axis and which, in turn, is pivotally supported about a vertical axis at a spacing from the suction head or is supported so as to be linearly adjustable or adjustable in height;

a rotary drive (52') for the suction head (52), a drive (30) for the arm (52), a lifting drive for the arm (52), and

a control device for activating the drives such that the semiconductor wafers (26) may



Application No. 09/668,866 Page 10 Amendment

be deposited on a lay-down device (74) in a predetermined, aligned position.]

- 3. (Amended) The apparatus according to claim 2 [1], characterized in that the mark (64) is a deepened space [point, especially a bore].
- 9. (Amended) The apparatus according to claim 1, characterized in that the arm (50) is pivotally supported about a vertical axis on a bearing component (28a) and is driven by a swivel drive and that the bearing component (28a) is movably supported along a linear guide (101) [(100)] which is arranged between the polishing machine and a second polishing machine and that the bearing component (28a) is adapted to be displaced by an actuator drive along the guide (101) [(100)].

Please add the following new claim:

11. (New) An apparatus for removing semiconductor wafers from within runner disks in a double-sided polishing machine, comprising:

a suction head (52) adapted to be connected to a vacuum, which has a plurality of suction ports (60, 61) such that all semiconductor wafers (26) received by a runner disk (24) may be gripped simultaneously;

an arm (50) on which the suction head (52) is rotatably supported about a vertical axis and which, in turn, is pivotally supported about a vertical axis at a spacing from the suction head or is supported so as to be linearly adjustable or adjustable in height;

a rotary drive (52') for the suction head (52), a drive (30) for the arm (50), a lifting drive for the arm (50), and

a control device for activating the drives such that the semiconductor wafers (26) may be deposited on a lay-down device (72) in a predetermined, aligned position;

a mark (64) on the runner disks that is a deepened space.

